

AMENDMENT

IN THE CLAIMS:

Claims 10-11, 13, 15-17, 19-32 are pending. Claims 10-11, 13, 16, 20, 23, and 24 have been amended. Claims 25-32 are new. Claims 1-9, 12, 14, and 18 have been canceled.

1-9 (Canceled)

10. (Currently Amended) An apparatus comprising:

an upper surface and a lower surface that are substantially parallel to each other, one of the said surfaces being fixed and the other surface being moveable relative to the fixed surface in response to applied force;
electrodes attached to each of the said upper and lower surfaces;
a variable capacitor attached to the electrodes which measures the capacitance between the two surfaces;
electric circuitry to provide an electrical output in response to changed capacitance;
and
~~a helical spring forming a spring assembly;~~ a plurality of conical washers stacked to form a spring assembly
~~the said spring assembly positioned between the upper surface and the lower surface~~
to form a capacitive force sensing device.

11. (Currently Amended) An apparatus comprising:

an upper surface and a lower surface that are substantially parallel to each other, one of the said surfaces being fixed and the other surface being moveable relative to the fixed surface in response to applied force;
electrodes attached to each of the said upper and lower surfaces;
a variable capacitor attached to the electrodes which measures the capacitance between the two surfaces;

electric circuitry to provide an electrical output in response to changed capacitance;

and

a spring assembly which deflects longitudinally in the direction of an applied force,

and transversely to the direction of the applied force such that the transverse

deflection does not touch any portion of the upper surface and the lower surface;

and a plurality of conical washers stacked to form the spring assembly ~~and the~~

~~said spring assembly~~ positioned between the upper surface and the lower

surface to form a capacitive force sensing device.

12. (Canceled)

13. (Currently Amended) The apparatus of Claim 11 ~~further comprising a~~ wherein each of the plurality of conical washers having an inside edge that is thicker than an outside edge of each of the plurality of the conical washers ~~(also known in the art as Belleville springs) to form the spring assembly.~~

14. (Canceled)

15. (Previously Presented) The apparatus of Claim 11 further comprising two conical washers placed on top of each other, base to base, to form the spring assembly.

16. (Currently Amended) The apparatus of Claim 11 further comprising multiple base to base conical washers placed on top of each other along the same axis to form the spring assembly.

17. (Previously Presented) The apparatus of Claim 15 where the top surface and the bottom surface of the spring assembly have less width compared to a middle portion of the spring assembly.

18. (Canceled)

19. (Previously Presented) The apparatus of Claim 11 further comprising multiple base to base conical washers placed side by side in the same plane to form the spring assembly
20. (Currently Amended) The apparatus of Claim ~~14~~11 where the transverse movement of the conical washers is negligible in the planes where the conical washers are in contact with the lower and upper surfaces and also in the planes where the conical washers are in contact with each other.
21. (Previously Presented) The apparatus of Claim 11 where the spring assembly has a large base compared to its height combined with a large flat top surface.
22. (Previously Presented) The apparatus of Claim 11 where the spring assembly is perforated, slotted, or combination of perforated and slotted.
23. (Currently Amended) The apparatus of Claim 11 where the conical washers are hollow.
24. (Currently Amended) A method comprising:
 - placing a fixed surface and a moveable surface substantially parallel to each other;
 - permitting the moveable surface to move in response to a force applied perpendicular to the moveable surface;
 - attaching electrodes to both the fixed and the moveable surfaces;
 - attaching a variable capacitor which measures the capacitance between the two surfaces;
 - positioning a plurality of conical washers stacked to form a spring assembly which deflects longitudinally in the direction of an applied force, and transversely to the direction of the applied force such that the transverse deflection does not touch any portion of the upper surface and the lower surface; and
 - measuring the applied force by measuring the capacitance using the variable capacitor.

25. (New) The method of Claim 24 wherein each of the plurality of conical washers having an inside edge that is thicker than an outside edge of each of the plurality of the conical washers.

26. (New) The method of claim 24, where the plurality of conical washers are placed on top of each other, base to base.

27. (New) The method of claim 24, where the top surface and the bottom surface of the spring assembly have less width compared to a middle portion of the spring assembly.

28. (New) The method of claim 24, where the plurality of conical washers includes multiple base to base conical washers are placed side by side in the same plane, and where the transverse movement of the conical washers is negligible in the planes where the conical washers are in contact with each other.

29. (New) The apparatus of claim 10, wherein each of the plurality of conical washers having an inside edge that is thicker than an outside edge of each of the plurality of the conical washers, and where the plurality of conical washers are placed on top of each other, base to base.

30. (New) The apparatus of claim 10, where the top surface and the bottom surface of the spring assembly have less width compared to a middle portion of the spring assembly, and where the plurality of conical washers includes multiple base to base conical washers are placed side by side in the same plane.

31. (New) The apparatus of claim 10, where the transverse movement of the conical washers is negligible in the planes where the conical washers are in contact with each other, and where the spring assembly has a large base compared to its height, and a large top flat surface.

32. (New) The apparatus of claim 10, where the spring assembly is at least one of perforated and slotted, and where the conical washers are hollow.